

ASAP ship 10/01

# Work Order ID 64957

January 5, 2011 8:08:46 AM



Page 1

Item ID: D4297-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearpaw

Start Date: 1/05/11

Start Qty: 4.00



Cust Item ID:

Required Date: 1/10/11

Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:   H  

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4297

A

120

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut Blank as per D2432 File

B11-1-5

(4)

130

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining

2-Machine as per Folio FA028 and Dwg

DWG REV: A

FOLIO REV: AA

3-Deburr

SL 11/01/05

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 64957

January 5, 2011 8:08:47 AM



Page 2

Item ID: D4297-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearpaw

Start Date: 1/05/11

Start Qty: 4.00



Cust Item ID:

Required Date: 1/10/11

Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140

QC2- Inspect parts off machine FAI/FAIB

0.00

*2L 10/01/05*

*4*

*0*

QC

Memo

0.00

Quality Control

150

QC8- Inspect parts - second check

0.00

*2L 11/01/06*

*4*

*0*

QC

Memo

0.00

Quality Control

151

Identify as per dwg & Stock Location:

0.00

Packaging

Memo

0.00

Packaging

*PDP*

*64935*

*Len/07/06 (4)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 64957

January 5, 2011 8:08:47 AM



Page 3

Item ID: D4297-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearpaw

Start Date: 1/05/11

Start Qty: 4.00



Cust Item ID:

Required Date: 1/10/11

Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

*OK* *11/01/06*

*A 11-01-06*

# Picklist Print

January 5, 2011 8:08:45 AM

Page 1

Work Order ID: 64957

Parent Item: D4297-1

Parent Item Name: Bearpaw




Start Date: 1/05/11

Required Date: 1/10/11

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 11-01-05 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10  UHMW 1" Black		Purchased	No				sf	95.5794	3.7	14.8			



R10-1-5

Location

Loc Qty

Loc Code

MAT

95.5794

114624

5.2734

115325

15.506

115955

38.8

116281

36

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
116281

(4)

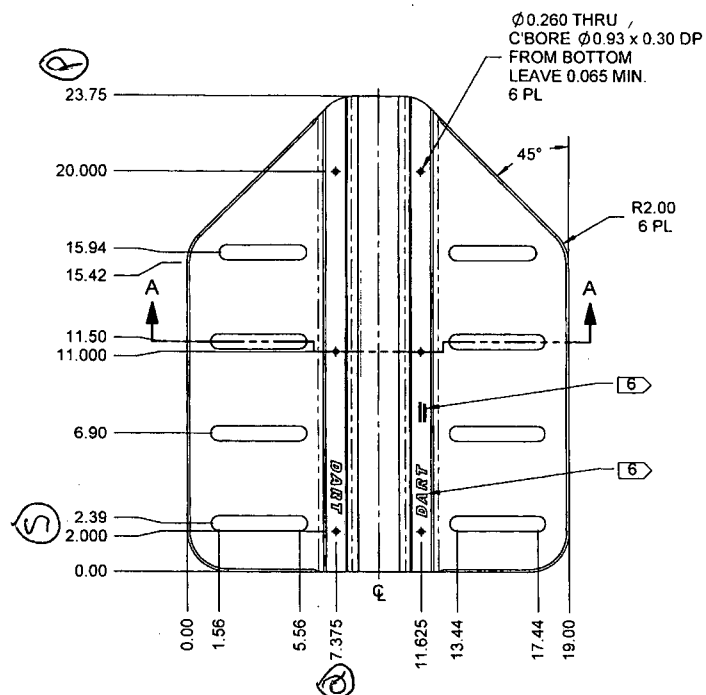
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



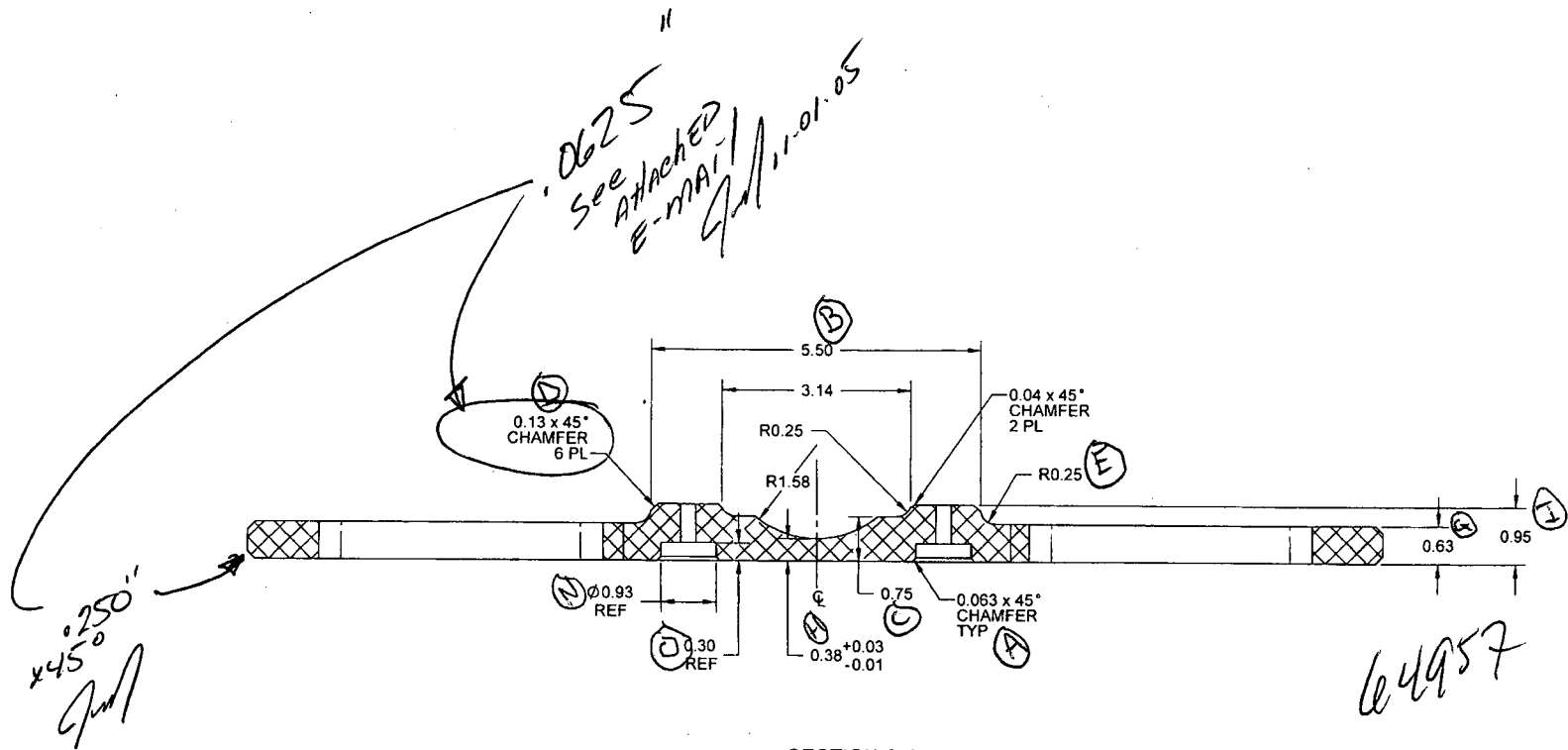
4064957

RELEASE  
2010-12-21  
PER FCN 10-67

7) WEIGHT: 8.32 lbs

A	NEW ISSUE		RF	10.12.15
REV.		DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b>		
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA		
CHECKED	<i>140</i>	DRAWING NO.		REV. A
MFG. APPR.	<i>21</i>	<b>D4297</b>		SHEET 1 OF 2
APPROVED	<i>140</i>	TITLE		SCALE
DE APPR.	<i>14</i>	<b>BEARPAW</b>		NTS
DATE	10.12.15	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN AUTHORIZATION FROM DART AEROSPACE LTD		





SECTION A-A  
SCALE 3X

64957

RELEASED  
2010-12-21

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	14	DRAWING NO.	REV. A
MFG. APPR.	91	D4297	SHEET 2 OF 2
APPROVED	14	TITLE	SCALE
DE APPR.	14	BEARPAW	NTS
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<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 64957
<b>Description:</b> Bearpaw		<b>Part Number:</b> <del>D2432</del> D4297
<b>Inspection Dwg:</b> D2432	<b>Rev:</b> <del>A</del> A	Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	0.062 x 45°	✓		vern. J2-3	
B	5.500	+/-0.030	5.505	✓		"	
<del>C</del>	<del>.75</del>	<del>±.030</del>	<del>.755</del>	<del>✓</del>		"	
D	0.25 x 45°	+/-0.030	.250 x 45°	✓		"	
E	R0.250	+/-0.030	.250	✓		R-G	
<del>F</del>	<del>0.250</del>	<del>+/-0.010</del>					
G	.63	+/-0.030	.632	✓		"	
H	.38	+/-0.030	.379	✓		"	
I	0.950	+0.030/0.010	.950	✓		"	
J	19.000	+/-0.030	19.00	✓		m-tape	
K	3.14	+/-0.030	3.130	✓		"	
<del>L</del>	<del>3.28</del>	<del>+/-0.030</del>					
M	Ø0.260	+0.005/-0.000	.260	✓		"	
N	Ø0.93	+/-0.030	.925	✓		"	
O	0.30	+0.030/-0.000	.315	✓		"	
P	23.750	+/-0.030	23.75	✓		m-tape	
Q	7.375	+/-0.030	7.386	✓		vern. C111-02	
R	4.250	+/-0.010	4.250	✓		"	
S	2.000	+/-0.030	2.018	✓		"	
T	9.000	+/-0.010	9.000	✓			
U	9.000	+/-0.010	9.000	✓			
<del>V</del>	<del>0.375</del>	<del>+/-0.010</del>					

<b>Measured by:</b> J2	<b>Audited by:</b> <i>aml</i>	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 11/01/05	<b>Date:</b> 11/01/06	<b>Date:</b>	

Rev	Date	Change	Revised by	Approved
A	04.01.09	New Issue P/O K10008/D206-559-015	KJ/RF <i>[Signature]</i>	<i>[Signature]</i>

## Jean-Luc Menard

---

**From:** David Shepherd <dshepherd@dartaero.com>  
**Sent:** January 5, 2011 3:46 PM  
**To:** 'Jean-Luc Menard'  
**Cc:** 'L Lacelle'  
**Subject:** RE: D4297-1 BEARPAW

JL,

As discussed, it is acceptable to make the chamfers on D4297-1 identical to D2432.  
Use this email to sign off the deviation on the work order.  
Please create a PAR so that D4297 dwg gets corrected for future production.

Thanks,  
David

-----Original Message-----

From: Jean-Luc Menard [mailto:jmenard@dartaero.com]  
Sent: Wednesday, January 05, 2011 1:15 PM  
To: David Shepherd  
Cc: L Lacelle  
Subject: D4297-1 BEARPAW

David,

As dicussed,this bearpaw should be identical as the D2432 minus the pockets.

The Qty of 4 we are currently making have a bottom chamfer of .250" same as the d2432 but the Dwg d4297 calls for .125".

Also,the top chamfer is .062",d4297 dwg calls for .125".

JLM

Jean-Luc Menard  
Production Engineering Coordinator  
Description: dart logo signature  
1270 Aberdeen Street  
Hawkesbury Ontario  
Canada K6A 1K7  
Tel:(613)632-5200 Ext 227  
<mailto:jmenard@dartaero.com> jmenard@dartaero.com

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